***TEACHER NOTES.***

CW#84 VOLUME of Prisms and Cylinders

Geometry

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| **CRS** | Geometry Content |
| **Objective** | 13.2 – Find volume of rectangular prisms and right cylinders |

**Definition of volume:** the number of cubic units contained in the interior of a solid

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| **Volume of a Cube** | **Volume of a Rectangular Prism** | | **Volume of a Right Cylinder** |
| V = s3  V = volume s = length of side | V = Bh =  V = volume B = area of base *(different from b=base)* h = height | | V = Bh =  V = volume B = area of base h = height r = radius of a base |
| **Example 1:** Find the volume of a cube if the surface area of one face is 49 in2. | **Example 2:** Find the volume of the solid. Round your answer to two decimal places if necessary. | | **Example 3:** Find the volume of the solid. Round your answer to two decimal places if necessary. |
| **Example 4:** The volume of a right cylinder is  cm3. Find the value of x. | | Find the length *x* using the given volume *V*.  *V*= 281.4 mm3 | |

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CW#104 VOLUME of Prisms and Cylinders

Geometry

1. Define volume:

2. How is volume different than surface area?

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| **Example 1:** Find the volume of a cube if the surface area of one face is 49 in2. | **Example 2:** Find the volume of the solid. Round your answer to two decimal places if necessary. | | | **Example 3:** Find the volume of the solid. Round your answer to two decimal places if necessary. |
| **Example 4:** The volume of a right cylinder is  cm3. Find the value of x. | | 1. Find the length *x* using the given volume *V*.   *V*= 281.4 mm3 | | |
| 1. Find the volume of the right cylinder. Round your answer to two decimal places. | | | 1. Find the volume of the rectangular prism. Round your answer to two decimal places. | |
| 1. Find the volume of the right cylinder. Round your answer to two decimal places. | | | 1. Find the volume of the right prism. Round your answer to two decimal places, if necessary. | |
| 1. Find the volume of the right cylinder. Round your answer to two decimal places. | | | 1. Find the length *x* using the given volume *V*. *V*= 3148 yd3 | |
| 1. Find the volume of the figure below. Round to the nearest whole number if necessary. | | | 1. How many 2 inch cubes can fit completely in a box that is 10 inches long, 8 inches wide, and 4 inches tall? **(Draw it!)**         1. 24    2. 32    3. 40    4. 320 | |
| 1. Four [cubes](http://www.vitutor.com/geometry/solid/hexahedron.html) of ice with an edge 4 cm each are left to melt in a cylinderical glass with a radius of 6 cm. How high will the water rise when they have melted? | | | 1. The height of a [cylinder](http://www.vitutor.com/geometry/solid/cylinder_geometry.html) is the same length as the [circumference](http://www.vitutor.com/geometry/plane/circumference.html) of its base. Its measured height is 125.66 cm. Calculate the surface area and volume of the cylinder. | |